

Avogadro's Principle worksheet SHOW ALL WORK WITH UNITS
State Avogadro's Principle-

What is standard temperature and pressure (STP)? _____

What volume does 1 mole of any gas occupy at STP(i.e. the molar volume of a gas)?

How much volume does 3 mol of CO_2 occupy at STP?

How much volume does 12.2 mol of O_2 occupy at STP?

How many moles of a gas occupy 12 L at STP?

How moles of nitrogen are present in 134 L at STP?

How many moles of methane are in 130mL at STP?

How many moles of Ar are in 20.0 L at 273 K and 1.2 atm of pressure? (Hint: remember the gas laws)

Gas Stoichiometry (SHOW ALL YOUR WORK WITH UNITS)

Balance the equation below and answer the following questions assuming STP:



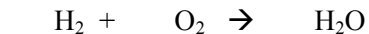
How many volumes of each gas are present? What is the volume ratio between N₂ and O₂

If 50L of nitrogen reacted how much oxygen would be needed?

If 6.0L of nitrogen dioxide were produced how many liters of each reactant were used?

For the above question how many moles of each reactant were used?

Balance the equation and answer the following questions using the reaction assuming STP:



If 10 L of hydrogen react how much water is needed?

When 34 L of water are formed how much hydrogen is used?

When 4 **grams** of hydrogen react how many grams of **water** are produced? (This is a mass to mass problem)